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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/615,700	07/13/2000	Volkmar Heuer	Q59675	4817

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EXAMINER

DUONG, FRANK

ART UNIT	PAPER NUMBER
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2666

6

DATE MAILED: 04/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/615,700

Applicant(s)

HEUER, VOLKMAR

Examiner

Frank Duong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3, 5
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

1. This Office Action is a response to the Preliminary Amendment dated 7/13/2000.

Claims 1-6 are pending in the application.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

3. The information disclosure statements filed 7/13/00 and 2/28/03 comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609. They have been considered and placed in the application file.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Ferguson (GB 2,310,971).

Regarding **claim 1**, in accordance with Ferguson reference entirety, Ferguson discloses a method of transmitting user data over a synchronous digital communication

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network (SDH) wherein the user data are packed in multiplex units, wherein a plurality of multiplex units are contiguously concatenated (VC-4-4c), wherein the contiguously concatenated multiplex units are transmitted in a common transport module (STM-4), and wherein the contiguous concatenation of the multiplex units (VC-4-4c) is converted to a virtual concatenation of multiplex units (VC-4-Nv) (*page 9, lines 12-15*), characterized in that only part of the multiplex units are filled with user data, and that in the conversion, those multiplex units which are not filled with user data are omitted (*page 10, lines 2-3 and line 18*).

Regarding **claim 2**, in addition to features recited in base claim 1 (see rationales discussed above), Ferguson further discloses wherein the user data are data packets structured according to the Internet protocol (*page 3, lines 1-4*), wherein the packing of the data packets in multiplex units is performed in an IP router (10; 40) (*page 2, lines 20-22*), wherein the conversion of the contiguous concatenation (VC-4-4c) to the virtual concatenation (VC-4-Nv) is performed in a multiplexer (129 50) of the synchronous digital communication network (SDH) (*page 9, lines 11-17*), and wherein the IP router (10; 40) informs the multiplexer (12; 50) which the concatenated multiplex units are filled with data packets (*page 10, lines 2-3 and line 18*).

Regarding **claim 3**, in addition to features recited in base claim 1 (see rationales discussed above), Ferguson further discloses wherein the user data are data packets structured according to the protocol for the asynchronous transfer mode (ATM), wherein the packing of the data packets in the multiplex units is performed in an ATM switch (AIM), wherein the conversion of the contiguous concatenation to the virtual

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concatenation is performed in a multiplexer (127 50) of the synchronous digital communication network (SDH) (AIM), and wherein the ATM switch informs the multiplexer (12; 50) which of the concatenated multiplex units are filled with data packets (*page 9, lines 11-17 and page 10, lines 2-3 and lines 18-22*).

Regarding **claim 4**, in addition to features recited in base claim 1 (see rationales discussed above), Ferguson further discloses wherein the virtual concatenation is subsequently converted back to a contiguous concatenation, adding empty multiplex units corresponding to the previously omitted multiplex units (*inherent at the other end AIM of the network and because of the data synchronization*).

Regarding **claim 5**, in accordance with Ferguson reference entirety, Ferguson discloses a multiplexer (12; 50) (AIM) for a synchronous digital communication network (SDH), comprising:

a first interface (51) for receiving a first message signal which is organized into transport modules and contains a plurality of contiguously concatenated multiplex units carrying user data to be transmitted (*not shown; inherent as an interface between ATM Switch and AIM*);

a conversion facility 56) for converting the contiguous concatenation to a virtual concatenation of the multiplex units (*not shown; inherent as disclosed on page 9, lines 11-17*); and

at least a second interface (58) for sending at least a second message signal which is organized into transport modules and contains the virtually concatenated

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multiplex units (not shown; inherent as an interface between the AIM and the SDH Multiplex), characterized in that if only part of the contiguously concatenated multiplex units are filled with the user data, the conversion facility (53, 54, 55, 56), when converting the contiguous concatenation to the virtual concatenation, omits those multiplex units which are not filled with user data *page 10, lines 2-3 and lines 18-22*).

Regarding **claim 6**, in accordance with Ferguson reference entirety, Ferguson discloses a peripheral device (10, 40) (*combined ATM Switch (AIM)*) for transmitting user data over a synchronous digital communication network (SDH), the peripheral device (107 40) (*combined ATM Switch (AIM)*) comprising a signal-generating unit (43) (AIM) for generating a message signal which is organized into transport modules and contains a plurality of contiguously concatenated multiplex units carrying user data to be transmitted, and a multiplexing facility (42, 46) for packing the user data in the multiplex units (page 9, lines 11-17), characterized in that the multiplexing facility (42, 46) fills only part of the multiplex units with user data (*page 10, lines 2-3 and lines 18-22*).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bernet et al (USP 5,764,645).

Saijonmaa et al (USP 5,706,285).

Klish (USP 6,014,708).

Sekii et al (USP 6,667,989).

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Russell et al (USP 6,584,118).

Malis et al, PPP over SONET/SDH, RFC 2615, pages 1-10, June 1999.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Duong whose telephone number is (703) 308-5428. The examiner can normally be reached on 7:00AM-3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (703) 308-5463. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Frank Duong
Examiner
Art Unit 2666

April 1, 2004